

**IN THE UNITED STATES PATENT & TRADEMARK OFFICE
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES**

In re Application of Patrick Carl Wiley

Serial No.: 10/622,634

Art Unit: 4571

Filed: 07/21/2003

Examiner: Cachet I. Sellman

For: **METHOD OF APPLYING A THERMALLY SETTABLE COATING TO A
PATTERNED SUBSTRATE**

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Commissioner for Patents
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REPLY BRIEF Pursuant to 37 CFR §41.41

In response to the Examiner's Answer dated 25 June 2009, Appellant hereby files this Reply Brief in accordance with 37 CFR §41.41 and requests that this appeal be maintained.

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Status of claims

Claims 2, 3, 5, 13, 20-35 and 40 are cancelled. Claims 1, 4, 6-12, 14-19, 36-39 and 41 are currently pending, stand rejected, and are under appeal. No claims have been allowed or withdrawn.

Grounds of rejection to be reviewed on appeal

The following grounds of rejection are to be reviewed:

1. Claims 1, 4 and 6-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Stowell et al. (US 5215402) in view of Corbin et al. (US 4854771), Pacey (EP0041335), and Wiley (US 5653552).
2. Claims 11, 12, 14 and 16-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Stowell et al. (US 5215402) in view of Corbin et al. (US 4854771) and Pacey (EP0041335), and further in view of Eigenmann (US 3235436).
3. Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over Stowell et al. (US 5215402) in view of Corbin et al. (US 4854771) and Pacey (EP0041335), and further in view of 3M Application of Stamark Pre-cut symbols and legends.
4. Claims 18 and 19 stand as rejected according to Form PTOL-326 of the Office Action mailed 3/24/2008 and Form PTOL-303 and the introductory paragraph at page 2 of the Office Action mailed 10/20/2008, but no grounds of rejection have been provided by the Examiner.
5. Claims 36-39 and 41 are rejected under 35 U.S.C. 103(a) as being unpatentable over Corbin et al. (US 4854771) in view of Stowell et al. (US 5215402) and further in view of Wiley (US 5653552).
6. Claims 36-41 are rejected under 35 U.S.C. 103(a) as being unpatentable over Corbin et al. (US 4854771) in view of Stowell et al. (US 5215402) and Pacey (EP0041335) and further in view of Wiley (US 5653552).

Argument

1. Reply to Examiner's Responses to Argument

A. Claims 1, 4 and 6-10 rejection under 35 U.S.C. 103(a)

The Examiner argues at the bottom of page 11 and top of page 12 of the Examiner's Answer that Corbin et al. shows the advantages of using preformed materials taking on the shape and color desired for a marking material "over using a paint as shown in the process of Stowell et al." due to the improved service life of thermoplastic in comparison to paint. It is submitted that Stowell et al. does not disclose the use of a paint as a marking material as alleged by the Examiner. Rather, as acknowledged by the Examiner earlier in the Examiner's Answer at page 3, Stowell et al. discloses a process for imprinting a pattern in an asphalt surface and then, in one embodiment of the invention, covering the imprinted surface with a thin layer of colored concrete (Stowell et al., column 3, lines 60-68). It is submitted that colored concrete is not a "paint" and in fact has a service life significantly exceeding that of paint. Moreover, a colored concrete coating has a service life which meets or often exceeds an equivalent thickness of a thermoplastic coating. Thus the Examiner's comparison between painted marking materials and preformed thermoplastic marking materials does not apply to the Stowell et al. coating. It is therefore submitted that a person of ordinary skill having regard to Stowell et al. would not be motivated to look to Corbin et al. for modifications relating to extending service life, as alleged by the Examiner.

Further, the Examiner appears to be interpreting the Stowell et al. coating as an asphalt "marking material". However, as indicated above, the aesthetic effect created by Stowell et al. results from first imprinting the asphalt surface with a template to create a pattern and then optionally applying the colored cement

coating to the patterned surface. The combination of these steps creates a patterned asphalt surface simulating bricks or mortar or some other decorative effect. Corbin et al. relates to an entirely different field of technology since it does not include the step of impressing a template into an asphalt surface to create a pattern prior to applying the thermoplastic. Thus the “marking” process described by Corbin et al. is of an entirely different nature than the process of Stowell et al. although in both cases the substrate is asphalt. The Appellant’s claims under consideration do not relate to “marking” asphalt generally but rather recite a specific sequence of steps which are not disclosed in Stowell et al. or Corbin et al., alone or in combination.

In view of the foregoing, it is submitted that the Examiner’s Answer has not shown any motivation for combining Corbin et al. and Stowell et al., and even if the references were combined they would not read upon the subject matter of the Appellant’s claims.

The Examiner states at the middle paragraph of page 12 of the Examiner’s Answer that Pacey is cited to provide an alternate method of attaching the marking material to the asphalt surface, namely by heating the thermoplastic material with a blow torch while it is being laid. However, a blow torch would not be practical for gradually heating thermoplastic sheets as presently claimed. As indicated at paragraph 33 of Appellant’s application as published, hand-held torch heaters cannot easily be used to evenly heat large areas and have a tendency to scorch the thermoplastic material and/or the underlying substrate. Further, since Corbin et al. describes applying a thermoplastic marking to a pliable asphalt surface using an asphalt roller, there would be no motivation for using the blow torch of Pacey to heat the thermoplastic. Indeed, heating the thermoplastic to a tacky state would interfere with the pressing step. A blow torch would also be of no use in applying the cementitious coating of Stowell et al. Appellant accordingly submits that the

Examiner's Answer has not shown that Pacey is applicable to the present application.

The Examiner argues at the bottom paragraph of page 12 of the Examiner's Answer that Wiley shows "gradual heating in order to prevent or minimize burning and smoking". Appellant submits that Wiley shows gradual heating to minimize burning and smoking of asphalt, not thermoplastic pavement markings. Asphalt and thermoplastics are completely different materials. A skilled person dealing with the problem of scorching thermoplastic would not consider it obvious to modify a thermoplastic heating protocol on the basis of a reference that dealt with heating asphalt, and vice versa (i.e., a skilled person dealing with the problem of burning and smoking asphalt would not consider it obvious to modify an asphalt heating protocol on the basis of a reference that dealt with heating thermoplastics). Further, Wiley, which is directed to heat-softening asphalt to facilitate its break up and recycling, relates to a completely unrelated process from Pacey, which is directed to blow torch heat-bonding reinforced thermoplastic pavement markings for laying onto asphalt surfaces. In view of the foregoing, Appellant submits that the Examiner's Answer has not shown any motivation for combining Pacey and Wiley. Further, even such references are combined, they do not teach the gradual heating step defined in Appellant's claims, for example pending claim 6.

B. Claims 11, 12, 14 and 16-17 are rejected under 35 U.S.C. 103(a)

As understood, the Examiner argues in the middle paragraph of page 13 that one of ordinary skill dealing with the issue of pavement markings having shorter service life would modify the "paint" taught by Stowell et al. by using instead the marking material taught by Eigenmann. As discussed above, Stowell et al. teaches a thin coloured concrete coating which has a service life significantly exceeding

that of paint. Further, Eigenmann's plastic pavement marking strips, which are applied on asphalt, relate to a completely different technology from Stowell's asphalt imprinting method, which involves pressing a template into asphalt and then removing it. Like Corbin et al., Eigenmann relates to road markings and is not intended to simulate bricks and mortar as described in Stowell et al. In view of the foregoing, Appellant submits that the Examiner's Answer has not demonstrated any motivation for combining Eigenmann and Stowell et al.

C. Claim 15 is rejected under 35 U.S.C. 103(a)

As understood, the Examiner argues at the top half of page 14 of the Examiner's Answer that the 3M reference shows that marking materials can be overlapped to form a pattern, and that such an overlapping technique could be applied to, for example, the imprint formed at the strips at locations 26 and 16 of Figure 3 of Stowell et al. when "paint material" is substituted with thermoplastic sheets. As discussed above, Stowell et al. uses a coloured cement coating rather than paint. Also, the Examiner relies on the 3M reference to allege that it is possible to overlap when forming a pattern, such as in forming the brick or cobblestone pattern in Stowell et al. However, the pattern in Stowell et al. is formed by imprinting the asphalt with a removable template, not by arranging or overlapping marking materials on asphalt as taught by the 3M reference. Appellant accordingly submits that the Examiner's Answer has not shown that the 3M reference is applicable to the present application.

2. Reply to Examiner's New Ground of Rejection

D. Claims 36-41 rejection under 35 U.S.C. 103(a)

The Examiner has rejected claims 36-41 under 35 U.S.C. 103(a) as being unpat-

entable over Corbin et al. (US 4854771) in view of Stowell et al. (US 5215402) and Pacey (EP0041335) and further in view of Wiley (US 5653552). The cited prior art is discussed above and is further summarized as follows.

Corbin et al. relates to a method of installing preformed pavement materials into asphalt surfaces. The asphalt is first heated until it is pliable and the preformed pavement marking material is positioned on the asphalt. The marking material is then pressed into the asphalt surface with an asphalt roller or the like.

Stowell et al. relates to a process patented by Appellant for forming impressions in asphalt surfaces. This process is discussed at page 1 of Appellant's application. The Stowell et al. process is designed to imprint asphalt to simulate the appearance of cobblestones or brick. After the template is removed and the asphalt is allowed to harden, a thin layer of cementitious coating may be applied to the imprinted asphalt surface to enhance the brick and mortar effect, as described above.

Pacey relates to a preformed road marking formed from a thermoplastic material and which incorporates a reinforcement. The preformed road marking may be heat bonded to the road surface by a blow torch.

Wiley et al. relates to a process for heating an asphalt surface by reciprocating a self-propelled vehicle comprising a series of heaters over the asphalt surface. The asphalt is heated to facilitate subsequent recycling of the asphalt.

Claim 36 includes the steps summarized in the "Summary of claimed subject matter" section of the Appeal Brief.

Appellant notes that neither claim 36 nor the claims dependent thereon recite various claim steps mentioned in the New Ground of Rejection section of the

Examiner's Answer, such as "imprinting the sheet by placing a template on the second surface of the sheet" and "compressing the template to form an impression in the sheet and substrate then removing the template from the second surface" as mentioned by the Examiner at the second paragraph of page 9 of the Examiner's Answer. Such steps were formerly recited in claim 20 which has been cancelled by way of Appellant's Amendment filed 23 September 2008.

Corbin et al. and Stowell et al.

The Examiner asserts at the fourth paragraph of page 9 of the Examiner's Answer that it would have been obvious to a skilled person to modify the process of Corbin et al. with Stowell et al. because both references disclose "decorating" asphalt surfaces and Stowell et al. teaches an operable template that can be used with hot asphalt. The Examiner also mentions at the first paragraph of page 9 of the Examiner's Answer that preformed thermoplastic markings are superior to painted marking material because they have a longer service life. It is submitted that the foregoing are insufficient motivations to combine Corbin et al. with Stowell et al.

The Stowell et al. reference describes a technique for creating a simulated brick or cobblestone pattern in asphalt. Stowell et al. discloses spreading a colored concrete slurry on the impressed asphalt surface to enhance the simulated appearance (Stowell et al., column 3, lines 56-67). The Corbin et al. material furthers its role as a pavement marking by taking on noticeable white or yellow colors (Corbin et al., column 1, lines 12-18). Such pavement marking colors are selected for their obvious and conspicuous nature and generally are not suitable for simulating cobblestone or brick and mortar. The fact that the Corbin et al. material takes on conspicuous colors supports the conclusion that it is adapted for an entirely different purpose than the Stowell et al. invention and in fact is not decorative in

nature.

As for the service life issue, Stowell et al. does not disclose the use of “paint” as an asphalt marking, as submitted above. Stowell et al. instead discloses the use of a thin coating of coloured concrete (Stowell et al, column 3, lines 60-68). As submitted above, colored concrete coating has a service life which meets or often exceeds an equivalent thickness of a thermoplastic coating. Thus the Examiner’s comparison between painted marking materials and preformed thermoplastic marking materials does not apply to the Stowell et al. coating. It is therefore submitted that a person of ordinary skill having regard to Stowell et al. would not be motivated to look to Corbin et al. for modifications relating to extending service life, as alleged by the Examiner.

Further, as submitted above, Corbin et al.’s thermoplastic pavement markings, which are inlaid on asphalt, relate to a completely different technology from Stowell’s asphalt imprinting method, which involves pressing a template into asphalt and then removing it. There is no suggestion in Corbin et al. of any reason for using the “operable template” of Stowell et al.

Accordingly, Appellant respectfully submits that there is no motivation to combine the Stowell et al. and Corbin et al. references.

Furthermore, even if Stowell et al. was combined with Corbin et al. (which Appellant maintains is improper), one would not reasonably expect to arrive at the subject matter of claim 36. Once an impressed asphalt surface according to Stowell et al. is produced, Corbin et al. teaches direct heating of the asphalt surface to reactivate and soften the surface to favourably receive the inlay material (Corbin et al., column 2, lines 39 to 44). The inlay material is then positioned on the softened asphalt surface and press-rolled with a minimum one ton weight

asphalt roller (Corbin et al., column 2, line 67 to column 3, line 6). Following the teaching of Corbin et al. would not achieve the desired result of the present invention, since rolling over a resoftened imprinted surface with an asphalt roller would likely eliminate the first pattern in the asphalt. Furthermore, rolling over the thermoplastic sheets would not be feasible given that the sheets will become tacky as the thermoplastic melts. Appellant notes that the pressing step is an essential step of the Corbin et al. teaching (and is recited in the main claim of that reference) and that eliminating this step would render the Corbin et al. teaching inoperable.

Pacey (and Stowell et al.)

The Examiner argues at the second paragraph of page 10 of the Examiner's Answer that it would have been obvious to a skilled person to modify the process of Stowell et al. with the blow torch heat bonding of Pacey because both disclose "processes for providing marking materials to roadways" and Pacey further teaches that markings can be in more than one section and that therefore the process is useful in order to assure the sections are aligned properly.

Appellant assumes the Examiner is arguing that a thermoplastic material could be heat bonded onto the Stowell et al. imprinted surface as a substitute for the coloured cement coating. It is submitted that the Examiner is improperly applying hindsight analysis to arrive at the subject matter of the Appellant's invention. As discussed above, Appellant maintains that the cited references provides no motivation for the foregoing substitution. As stated in Appellant's application, blow torches are not suitable for gradually heating thermoplastic sheets. As a counterexample, the present application discloses the use of infrared heaters, which are suitable for gradually heating thermoplastic sheets. Accordingly, a skilled person would not have been motivated to modify Stowell et al. in any way

with the blow torch heat bonding of Pacey.

That Pacey may teach that markings can be in more than one section and that therefore the process is useful in order to assure the sections are aligned properly is irrelevant since none of the claims at issue recite such features.

Wiley (and Stowell et al. and Corbin et al. and Pacey)

The Examiner argues at the bottom paragraph of page 10 of the Examiner's Answer that a skilled person would have been motivated to modify Stowell et al., Corbin et al. and Pacey to include gradually heating the substrate as taught by Wiley because the references disclose processes for heating pavement in order to apply a marking material and Wiley teaches gradual heating of pavement to minimize or eliminate burning or smoking.

The claims at issue do not recite gradual heating of the substrate (i.e., the asphalt surface) but rather gradual heating of the thermally settable sheet. Combining the references as alleged by the Examiner therefore does not result in the claimed invention.

Also, Pacey discloses heating thermoplastic pavement markings, not the asphalt substrate. Wiley shows gradual heating to minimize burning and smoking of asphalt, not thermoplastic pavement markings. As discussed above, asphalt and thermoplastics are completely different materials, and a skilled person dealing with the problem of burning and smoking thermoplastic would not consider it obvious to modify a thermoplastic heating protocol on the basis of a reference that dealt with heating asphalt, and vice versa (i.e., a skilled person dealing with the problem of burning and smoking asphalt would not consider it obvious to modify a asphalt heating protocol on the basis of a reference that dealt with heating

thermoplastics). Further, Wiley, which is directed to heat-softening an asphalt to facilitate its break up and recycling, relates to a completely different process from Pacey, which is directed to blow torch heat-bonding thermoplastic pavement markings for laying onto asphalt surfaces. Appellant accordingly submits that the Examiner's Answer has not demonstrated any motivation for combining Pacey and Wiley.

Summary

Appellant submits for the foregoing reasons, in addition to the reasons set out in the Appeal Brief, that the Examiner's rejections of independent claims 1 and 36 and dependent claims 4, 6-12, 14-19, 37-39 and 41 were erroneous and reversal of such rejection is respectfully requested.

Respectfully submitted,

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